ABSTRACT

The invention provides a method for detecting and isolating software bugs and generating a minimal set of stimuli to reproduce the bugs. The present invention utilizes a recursive algorithm to compare the output of successively smaller software blocks of a program in development to a verified output sample. The smallest software blocks which are found to contain a bug are isolated. For each of these isolated blocks, the smallest input vector is determined such that the application of this vector to the block expresses the bug. The present invention utilizes a separate recursive algorithm to determine these minimal vectors.